

Report Name	Sydney Metro State Significant Development Application Response to Submission (SSD 10376 & SSD 8876-2)
Prepared for	Pitt Street Developer South Pty LTD
Project	Pitt Street South Over Station Development (OSD)
Date	31 August 2020
Revision	01

1 Introduction

This document has been prepared in response to Sydney Metro Pitt Street South OSD Stage 1 Modification (SSD 8876 MOD2) and Stage 2 (SSD 10376) Response to Submission dated 8 July 2020. This analysis has been prepared to address the Response to Submission (RTS) for the Pitt Street South Over Station Development. The requirement from the Department of Planning, Industry and Environment (DPIE) relating to residential amenity is detailed below for reference:

2. Residential Amenity

Review and revise the proposal with respect to compliance with SEPP 65 and the Apartment Design Guidelines (ADG) (as required by Condition B3(h) of the Concept Approval), including further consideration and illustration of:

- *how the proposed lift configuration and associated layout will meet common circulation requirements.*

Note: The Applicant's response to the above must include appropriate modelling, drawings and specifications as necessary to demonstrate compliance with ADG.

2 Response

2.1 State Environmental Planning Policy No.65 - Design Quality for Residential Apartment Development (SEPP 65)

In assessing the vertical transportation requirements for the proposed OSD Build to Rent (BtR) development the State Environmental Planning Policy No.65 - Design Quality for Residential Apartment Development (SEPP 65) including the Apartment Design Guide (ADG) July 2015 (which translates the design policy into practice) has been reviewed.

Though the SEPP has been created to ensure consistent planning and design standards for apartment developments throughout NSW, the ADG is designed as a guide only for planning residential apartments, designing a building, or assessing applications.

Within the ADG, the design criteria for vertical transportation services in a building 10 storeys and over is referenced in **Part 4 - Designing the building, Objective 4F-1** (refer below extract).

Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments	
Design criteria	
1.	The maximum number of apartments off a circulation core on a single level is eight
2.	For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40

The proposed design does not comply with the above guide with 3 lifts servicing 234 apartments. With the application of a ratio only methodology to SEPP 65 Objective 4F-1 Design Criteria No.2 for strict compliance, the lift quantity requirement for the building, depending on interpretation, could be up to a total of 6 Lifts to service occupants on all residential levels. This has been determined to be in excess of the buildings capacity requirements.

In order to satisfy the lifting requirements for the building the current industry performance criteria (international CIBSE Guide D 2015 and ISO 8100-32) has been used to assess the development. This criteria requires the building to be assessed by the population per bedroom to calculate the required quantity of lifts for a specific building design.

Vertical Transportation services are typically designed to achieve a defined performance specific to building layout, usage and overall population, as building design can be varied so can the Vertical Transportation service requirement.

With the application of the industry standard performance criteria, the proposed three lift system for passenger transport has been assessed and determined to provide satisfactory service to occupants on all residential levels served. Table 2.3.1 provides further detailed breakdown of the interval time and handling capacity requirements in order to services the building with three lifts.

2.2 Lifting Analysis

The Lifts have been designed in accordance with international CIBSE Guide D 2015 and ISO 8100-32: Planning and selection of passenger lifts to be installed in office, hotel and residential buildings, these are internationally recognised and adopted lift guidelines and standards applicable to residential buildings.

The lift specifications are as follows:

- 2 x 21 Passenger 1600kg passenger lifts
- 1 x 21 Passenger 1600kg min. for passengers and loading

2.3 Comparable Residential Projects

	Projects	Floors	Number of Apartments	Number of Lifts	Lift Ratio to Apartments
1	Greenland Centre, 115 Bathurst St, Sydney CBD	30 (Hi Rise)	180	3	1:60
2	Castle Residences , 116 Bathurst St, Sydney, CBD	40	131	3	1:44
3	Boomerang Towers – 3 Olympic Boulevard	39	230	3	1:77



2.4 CIBSE Guide D 2015

Table 1 demonstrates the scheme meets or exceeds both the interval time and handling capacity required under the most stringent ‘luxury’ category. Analysis is based on 100% occupancy, the most onerous occupancy, described as ‘luxury’ under the standard, has been assumed.

2.4.1 Table 1

Level	RL	Floor Height	Lift No.1	Lift No.2	Lift No.3	1B	Mix 2B	3B	Flr Pop. (Lux)	Flr Pop. (Norm)
36	153.35	0	>	>	>	3	1		6.5	8.4
35	150.25	3.1	>	>	>	3			4.5	5.4
34	146.95	3.3	>	>	>	3	5		14.5	20.4
33	143.85	3.1	>	>	>	3	5		14.5	20.4
32	140.75	3.1	>	>	>	3	5		14.5	20.4
31	137.65	3.1	>	>	>	3	5		14.5	20.4
30	134.55	3.1	>	>	>	3	5		14.5	20.4
29	131.45	3.1	>	>	>	3	5		14.5	20.4
28	128.35	3.1	>	>	>	3	5		14.5	20.4
27	125.25	3.1	>	>	>	3	5		14.5	20.4
26	122.15	3.1	>	>	>	3	5		14.5	20.4
25	119.05	3.1	>	>	>	3	5		14.5	20.4
24	115.95	3.1	>	>	>	3	5		14.5	20.4
23	112.85	3.1	>	>	>	3	5		14.5	20.4
22	109.75	3.1	>	>	>	3	5		14.5	20.4
21	106.65	3.1	>	>	>	3	5		14.5	20.4
20	103.55	3.1	>	>	>	3	5		14.5	20.4
19	100.45	3.1	>	>	>	3	5		14.5	20.4
18	97.35	3.1	>	>	>	3	5		14.5	20.4
17	94.25	3.1	>	>	>	3	5		14.5	20.4
16	91.15	3.1	>	>	>	3	5		14.5	20.4
15	88.05	3.1	>	>	>	3	5		14.5	20.4
14	84.95	3.1	>	>	>	3	5		14.5	20.4
13	81.85	3.1	>	>	>	3	4		12.5	17.4
12	78.75	3.1	>	>	>	3	2		8.5	11.4
11	75.65	3.1	>	>	>	3	2		8.5	11.4
10	72.55	3.1	>	>	>	3	2		8.5	11.4
9	69.45	3.1	>	>	>	3	2		8.5	11.4
8	66.35	3.1	>	>	>	3	2	3	17.5	23.4
7	63.25	3.1	>	>	>	3	1	3	15.5	20.4
6	58.25	5	>	>	>					
5	49.925	8.325			>					
4	43.1	6.825			>					
3	39.6	3.5	>	>	>					
2	35.1	4.5	>	>	>					
1	29.6	5.5	>	>	>					
G	24.85	5.1	>	>	>					

Table 3.12 Occupancy factors (persons) for residential buildings

Type	Luxury	Normal	Low income
Studio	1.0	1.5	2.0
1 bedroom	1.5	1.8	2.0
2 bedroom	2.0	3.0	4.0
3 bedroom	3.0	4.0	6.0

Table 3.13 Design criteria: residential buildings (5-minute, two-way)

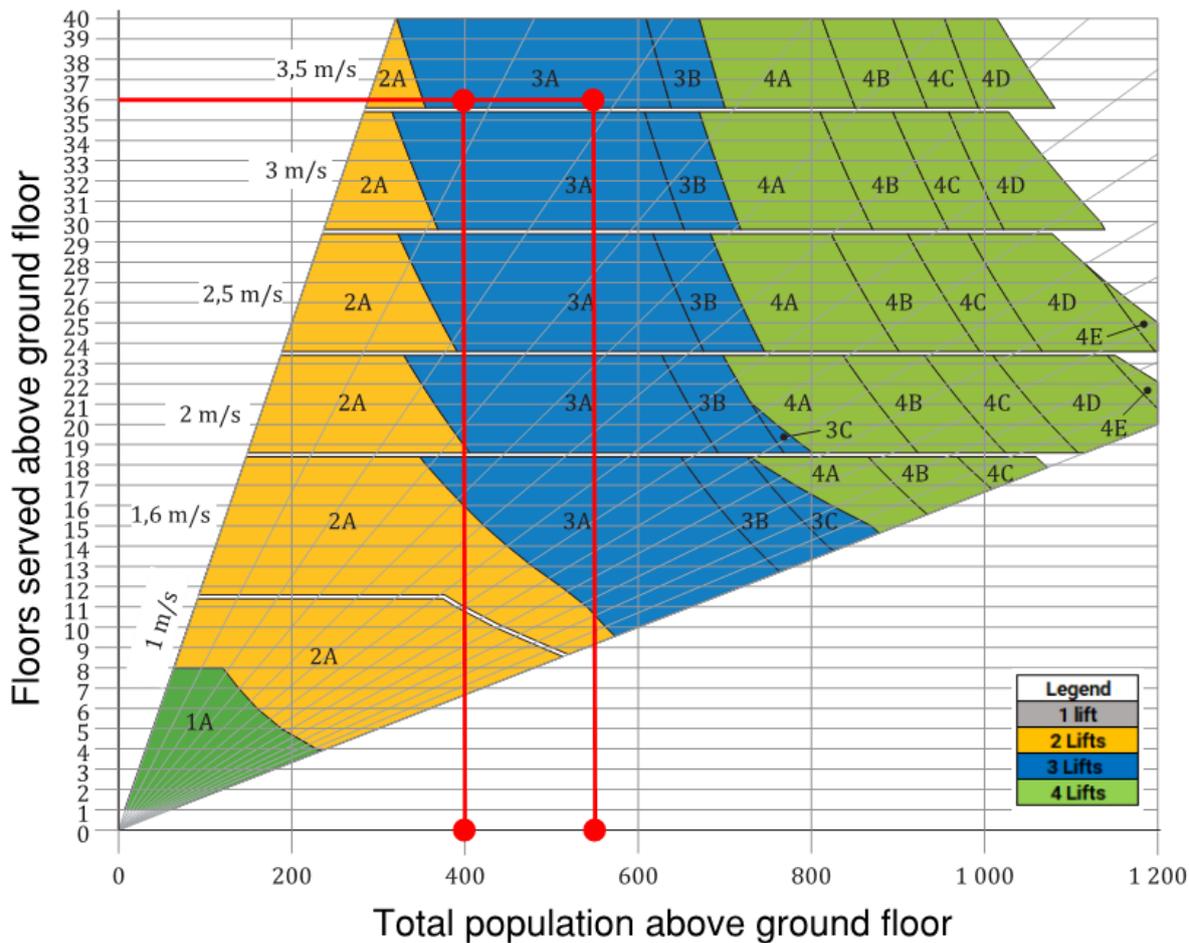
Type	Luxury	Normal	Low income
Interval (s)	45-50	50-60	50-70
Two-way handling capacity (%)	8	6-8	5-7

Travel (m)	128.5	128.5	128.5	Total	395	549
Stops	35	35	37	TWO-WAY HANDLING CAPACITY (%)	8%	6% - 7%
Openings (Front)	35	35	37	INTERVAL (secs)	46.4 s	48.9 s - 56.7 s

2.5 ISO 8100-32 (2020)

2.5.1 Table 2

Table 2 demonstrates the proposed lift scheme satisfies ISO 8100-32 C.3 Passenger lift selection for residential buildings performance with three residential lifts for the total building population range (395 – 549) from Table 1 to be served above Ground floor.



Prepared by Michael Ritchie (Senior Associate)



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